App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al.
Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 1 of 35



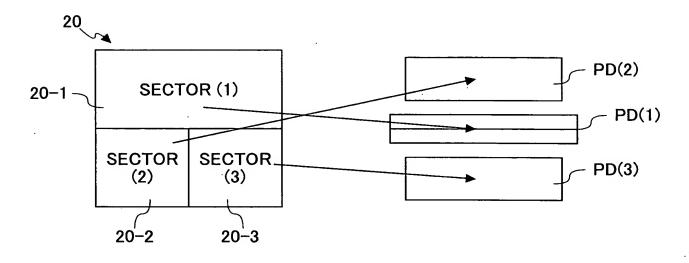
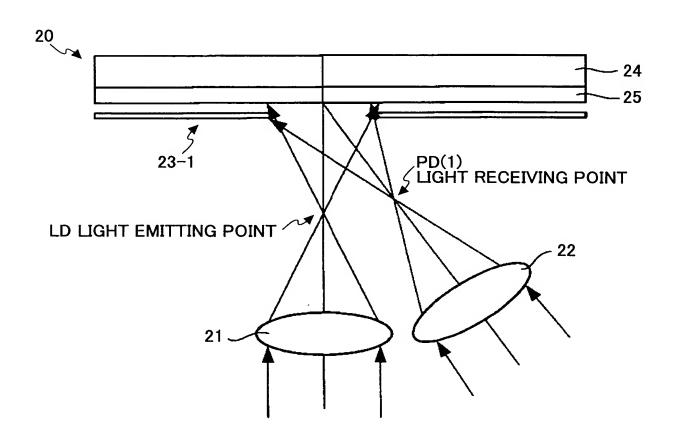


FIG.2



App No.: Not Yet Assigned Inventor: Hiroyoshi Funato et al. Docket No.: R2184.0312/P312 `

Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 2 of 35

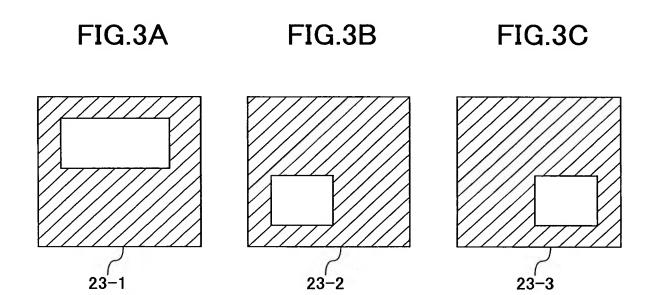
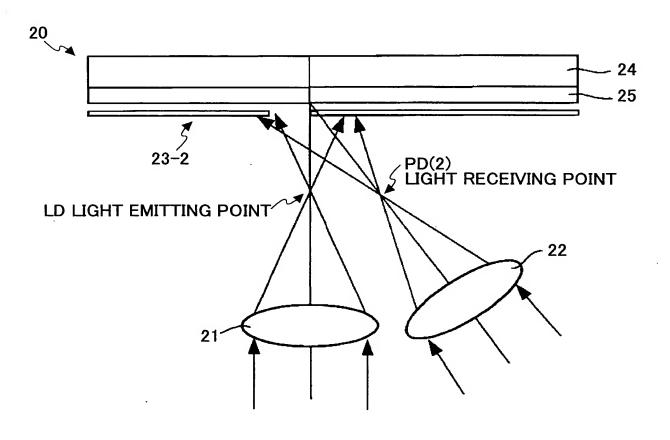


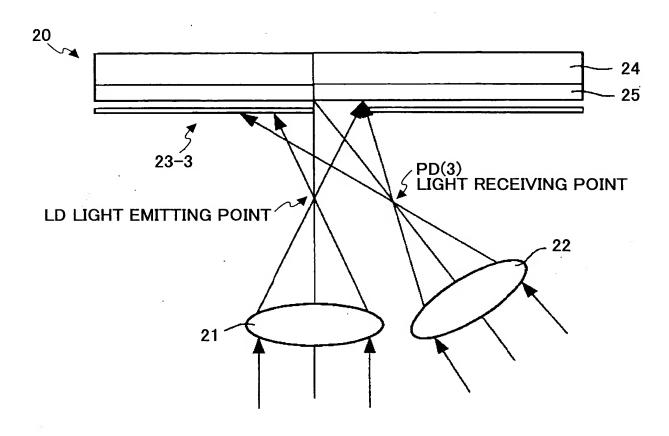
FIG.4



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE... Docket No.: R2184.0312/P312

Sheet 3 of 35

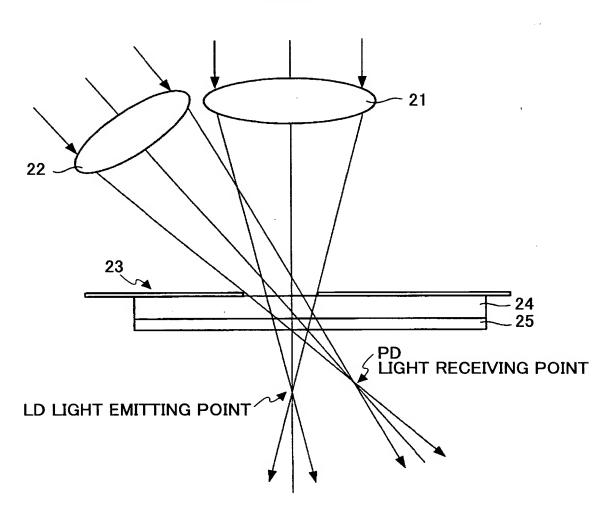
FIG.5



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 4 of 35

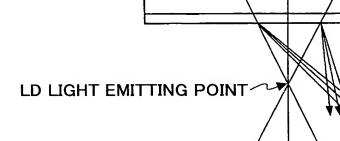
FIG.6



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al.

Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE ...

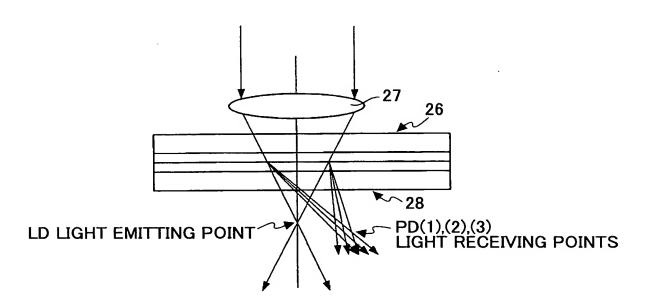
FIG.7



PD(1),(2),(3)
LIGHT RECEIVING POINTS

Sheet 5 of 35

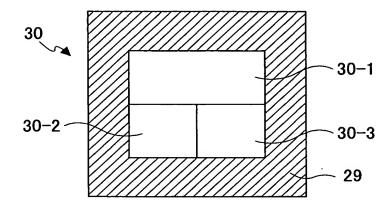
FIG.8



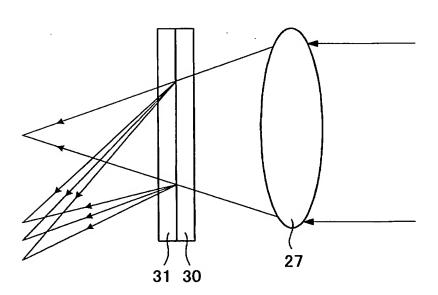
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 6 of 35

FIG.9



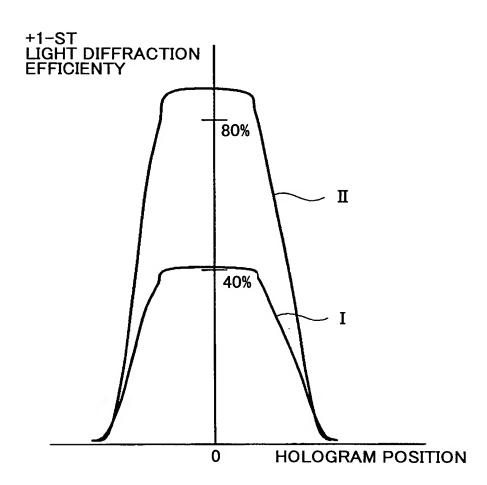
**FIG.10** 



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 7 of 35

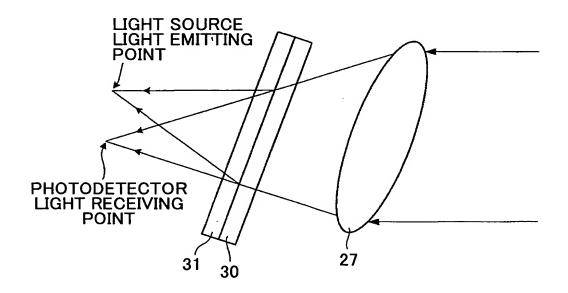
**FIG.11** 



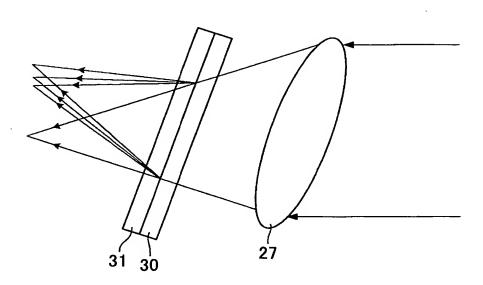
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 8 of 35

FIG.12



**FIG.13** 



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 9 of 35

FIG.14

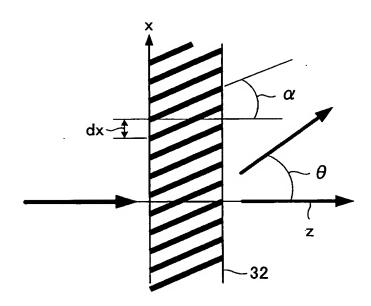
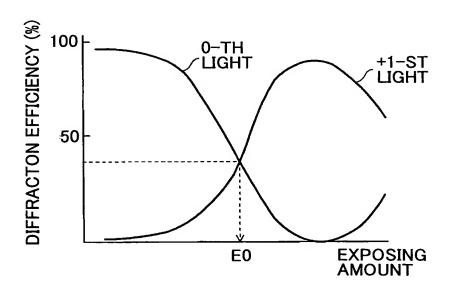


FIG.15



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE ...

Sheet 10 of 35

FIG.16

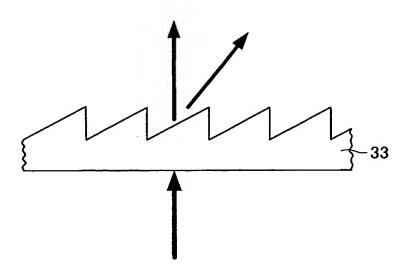
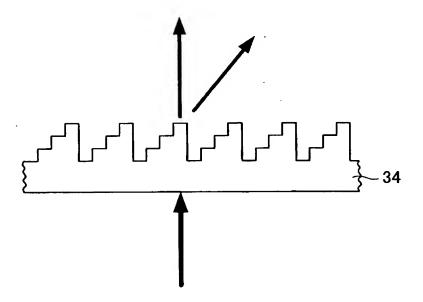


FIG.17



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 11 of 35

FIG.18

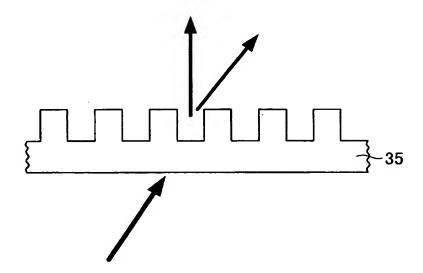
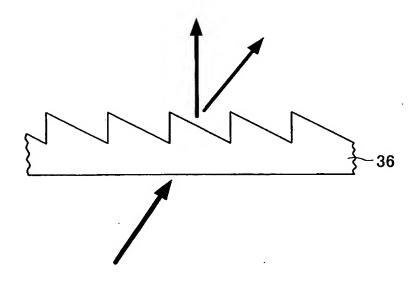


FIG.19



App No.: Not Yet Assigned Docket No.: R2184.0312/P312
Inventor: Hiroyoshi Funato et al.
Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT,
METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE... Docket No.: R2184.0312/P312

Sheet 12 of 35

**FIG.20** 

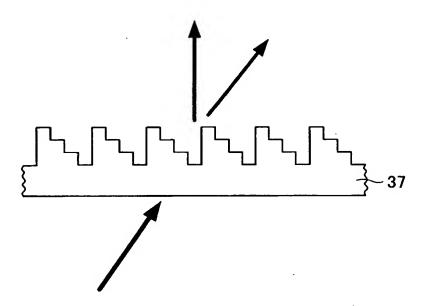
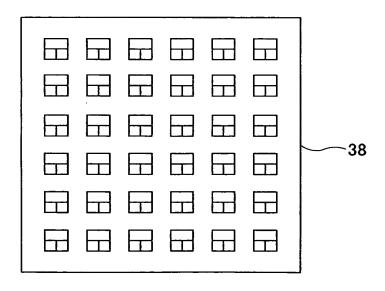


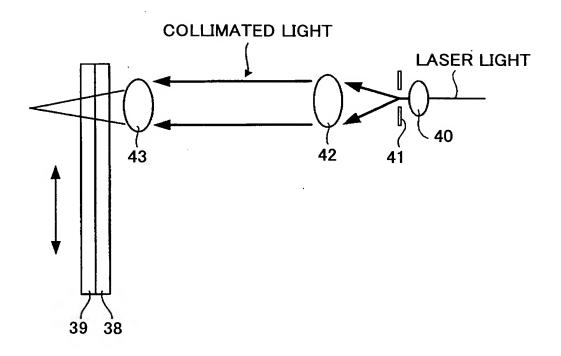
FIG.21



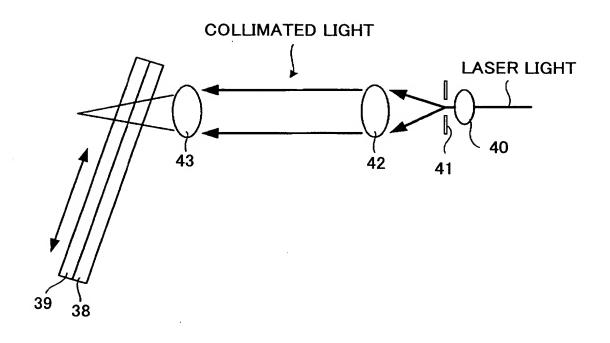
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 13 of 35

FIG.22



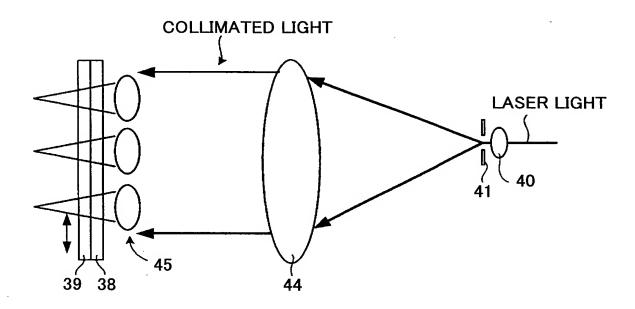
**FIG.23** 



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 14 of 35

**FIG.24** 

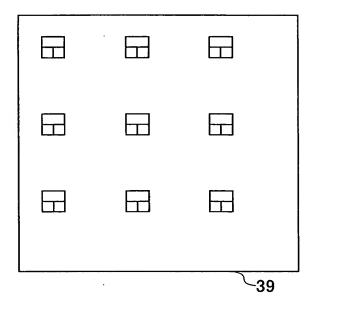


App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 15 of 35

FIG.25A

FIG.25B



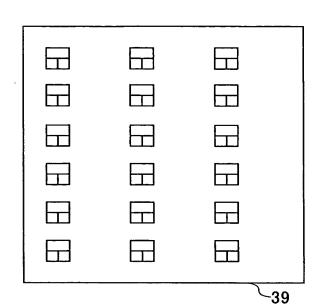
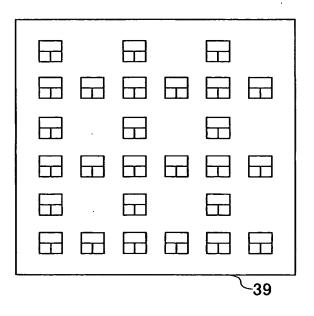
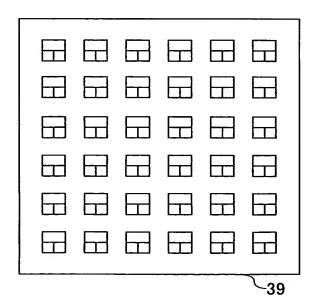


FIG.25C

FIG.25D

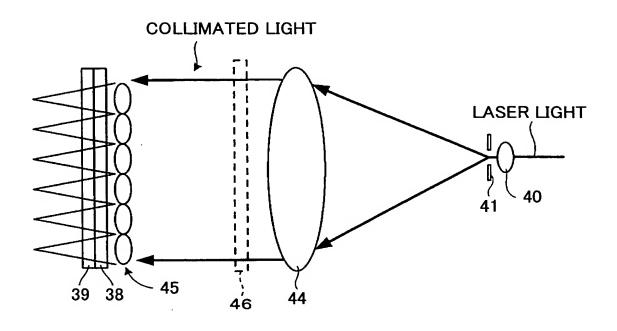




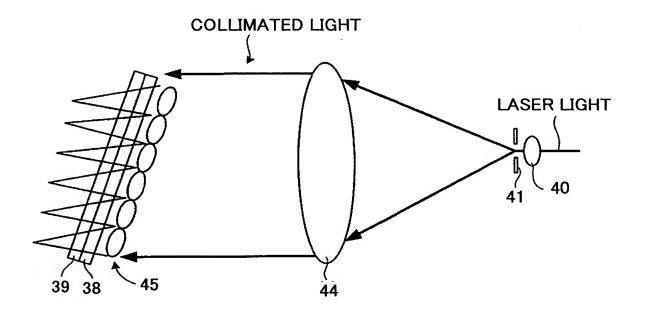
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 16 of 35

FIG.26



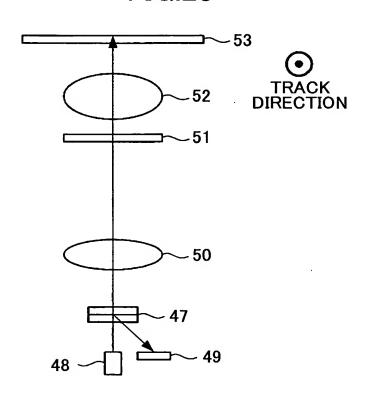
**FIG.27** 



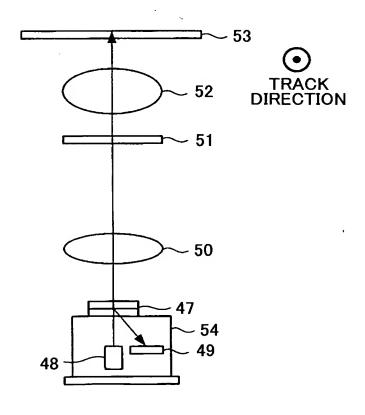
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 17 of 35

**FIG.28** 



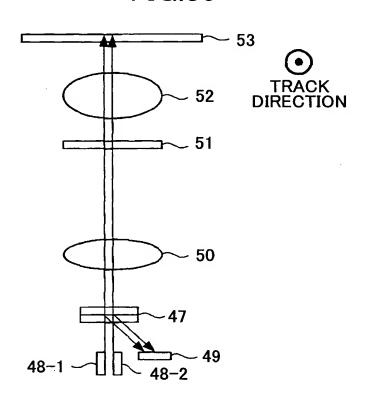
**FIG.29** 



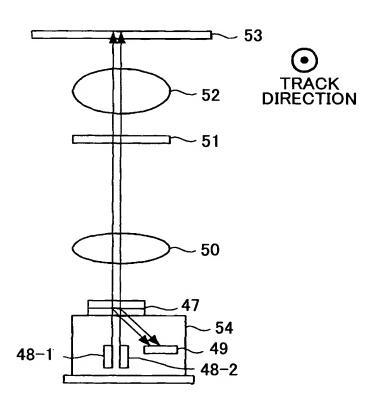
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 18 of 35

**FIG.30** 

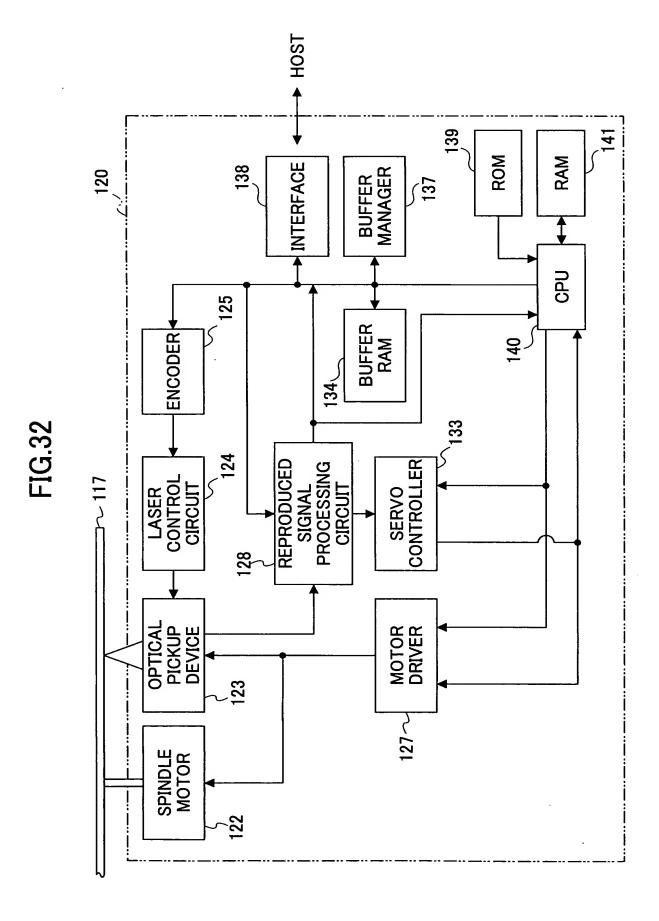


**FIG.31** 



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE... Docket No.: R2184.0312/P312

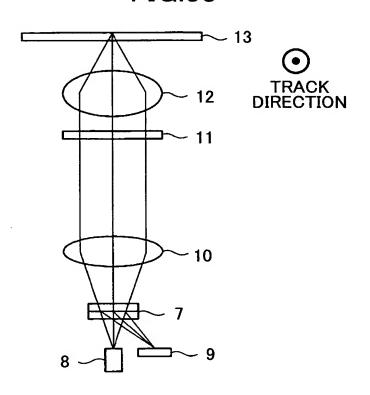
Sheet 19 of 35



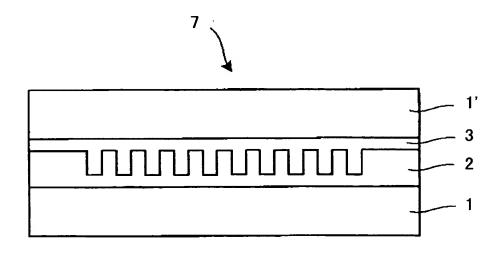
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 20 of 35

**FIG.33** 



**FIG.34** 



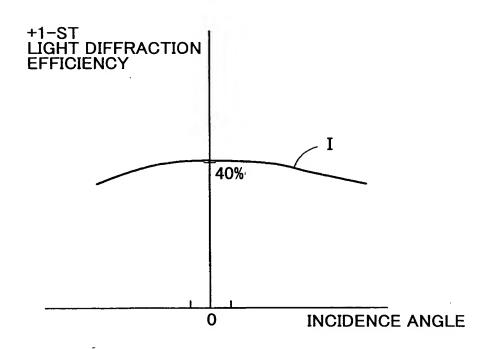
Docket No.: R2184.0312/P312 App No.: Not Yet Assigned

Inventor: Hiroyoshi Funato et al.

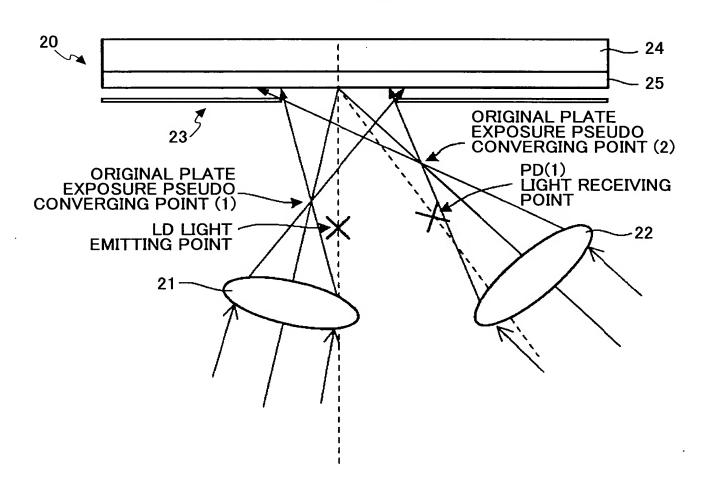
Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT,
METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 21 of 35

**FIG.35** 



**FIG.36** 



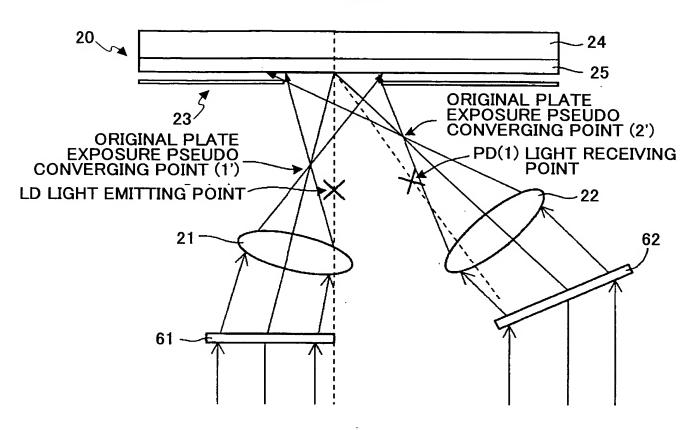
App No.: Not Yet Assigned Docket No.: R2184.0312/P312

Inventor: Hiroyoshi Funato et al.

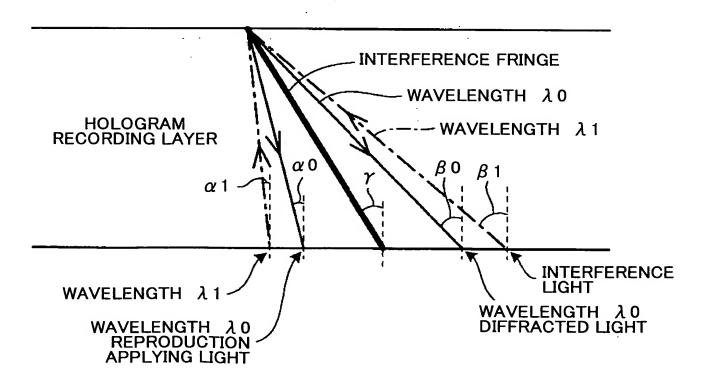
Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

**Sheet 22 of 35** 

**FIG.37** 



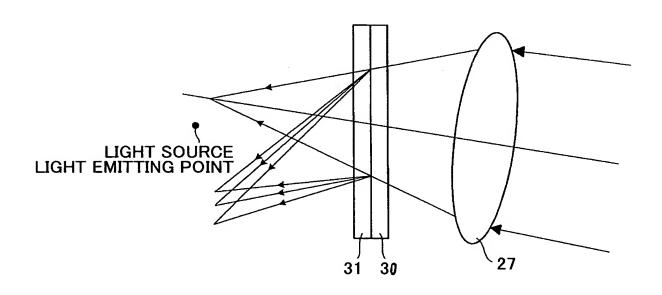
**FIG.38** 



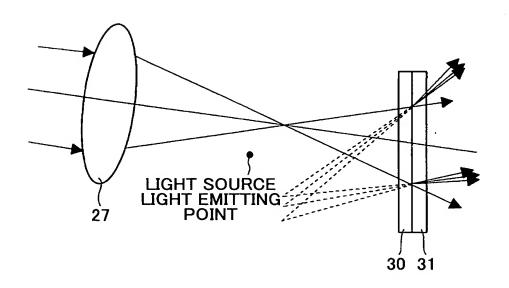
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 23 of 35

FIG.39



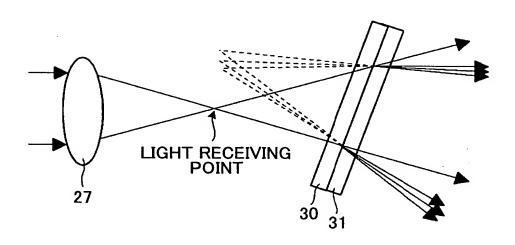
**FIG.40** 



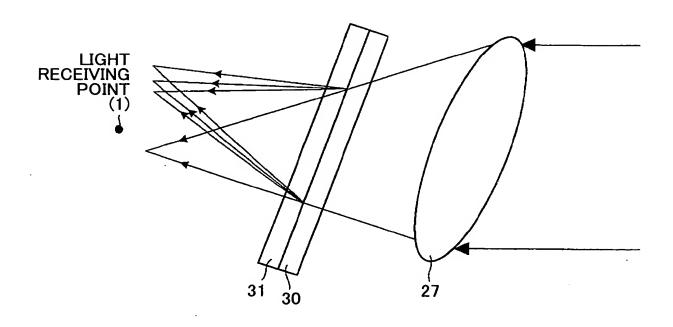
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 24 of 35

**FIG.41** 



**FIG.42** 



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 25 of 35

**FIG.43** 

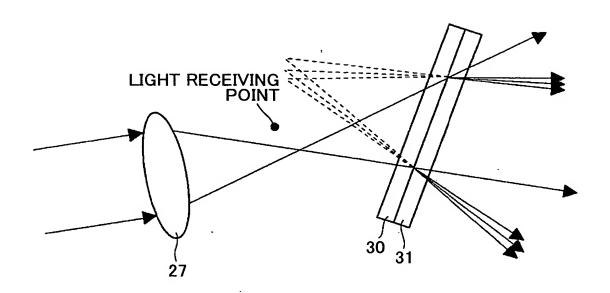
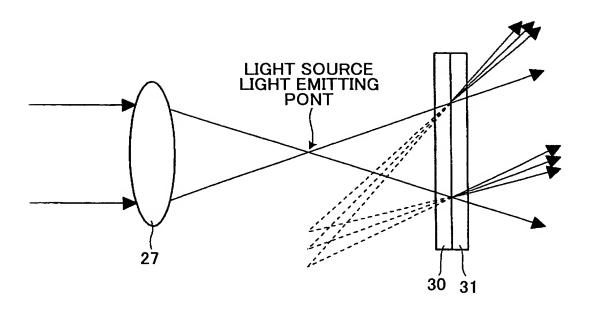


FIG.44A FIG.44B 302 301 302 31

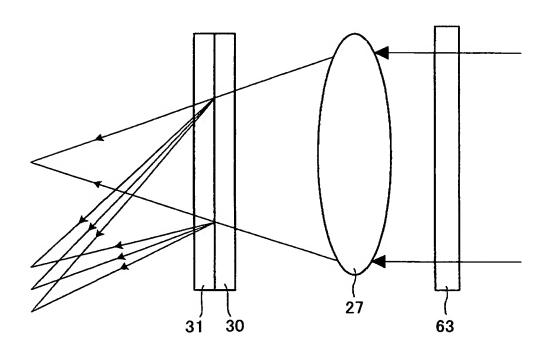
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 26 of 35

**FIG.45** 



**FIG.46** 

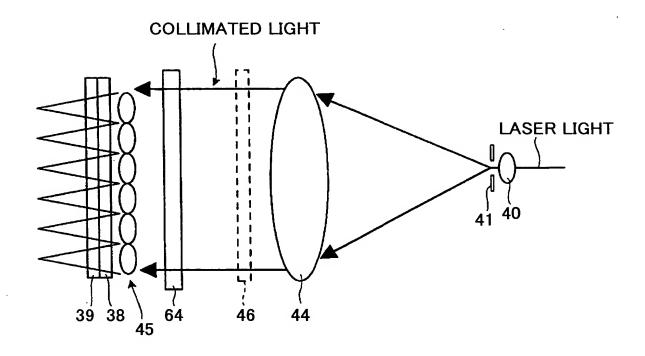


App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al.

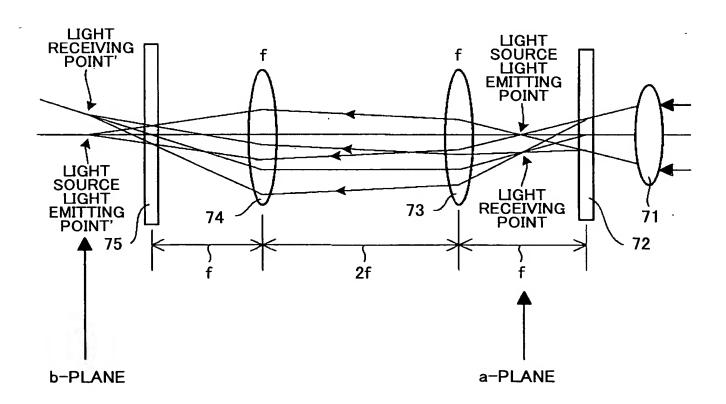
Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 27 of 35

**FIG.47** 



**FIG.48** 



App No.: Not Yet Assigned Docket No.: R2184.0312/P312
Inventor: Hiroyoshi Funato et al.
Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT,
METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 28 of 35

FIG.49

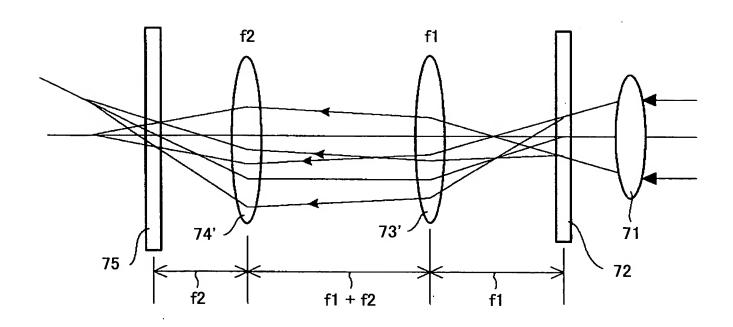
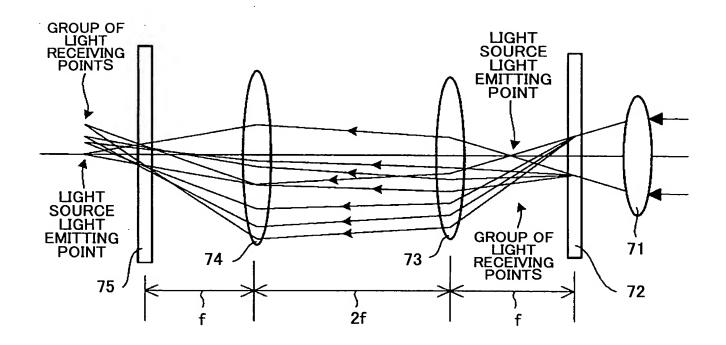


FIG.50



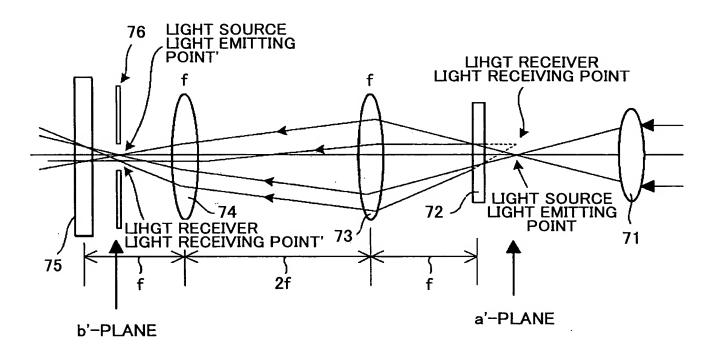
App No.: Not Yet Assigned Docket No.: R2184.0312/P312

Inventor: Hiroyoshi Funato et al.

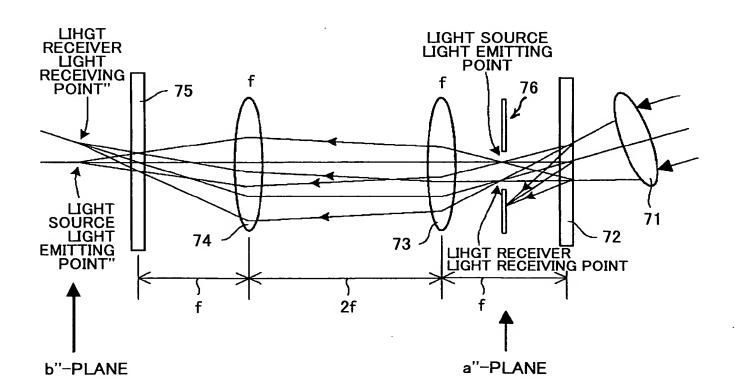
Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT,
METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 29 of 35

## **FIG.51**



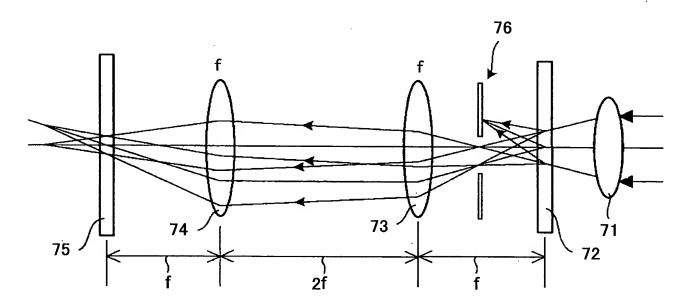
**FIG.52** 



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

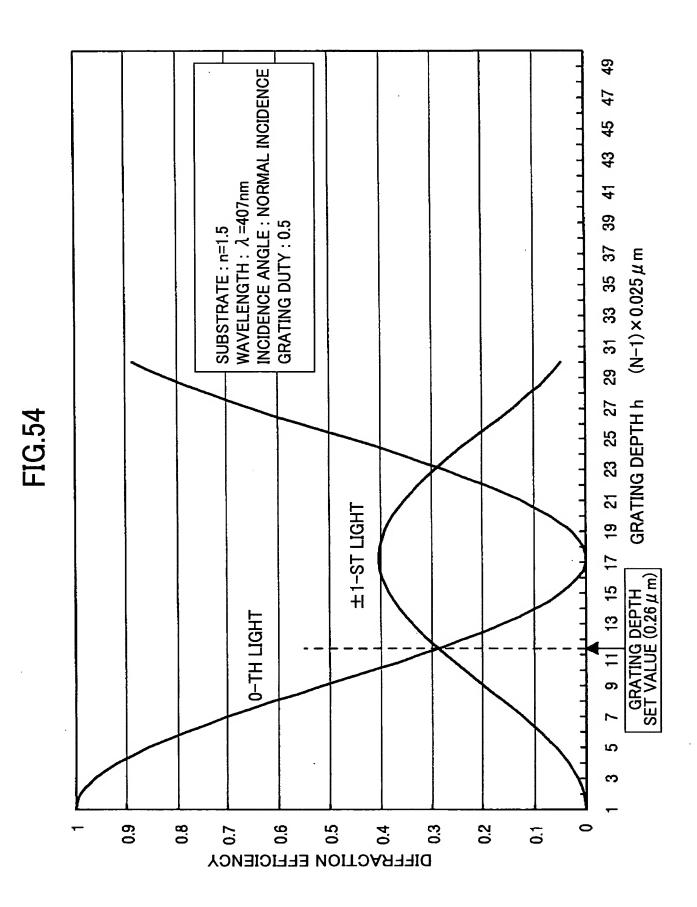
Sheet 30 of 35

**FIG.53** 



App No.: Not Yet Assigned Docket No.: R2184.0312/P312
Inventor: Hiroyoshi Funato et al.
Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT,
METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

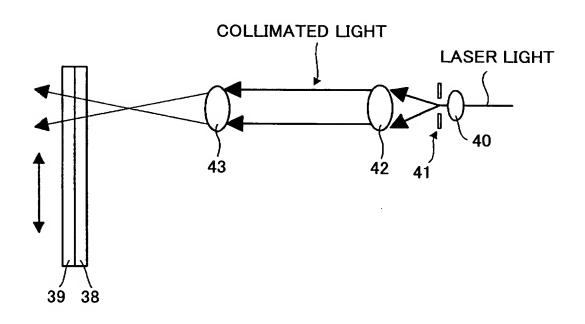
**Sheet 31 of 35** 



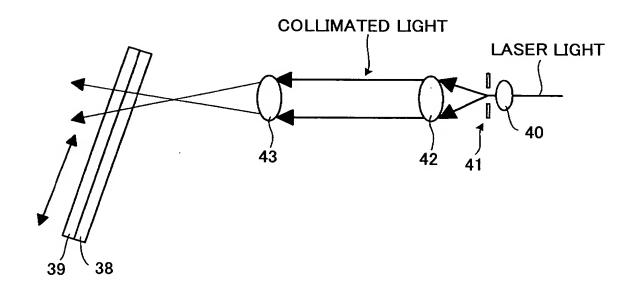
App No.: Not Yet Assigned Docket No.: R2184.0312/P312
Inventor: Hiroyoshi Funato et al.
Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT,
METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 32 of 35

**FIG.55** 



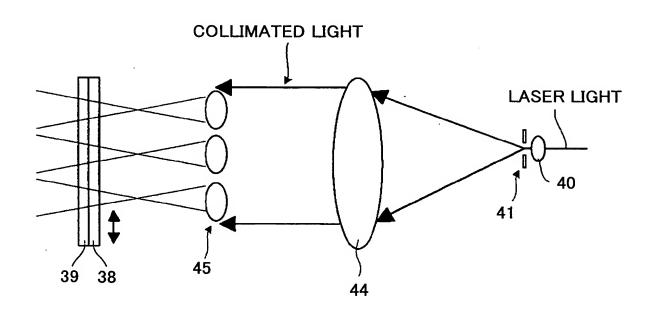
**FIG.56** 



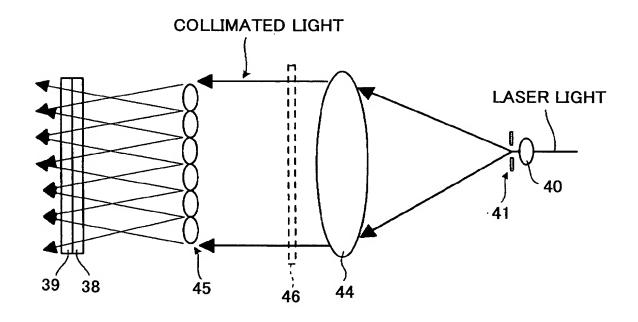
App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 33 of 35

**FIG.57** 



**FIG.58** 

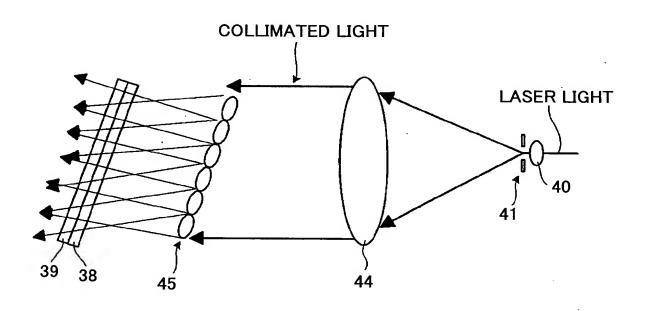


App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

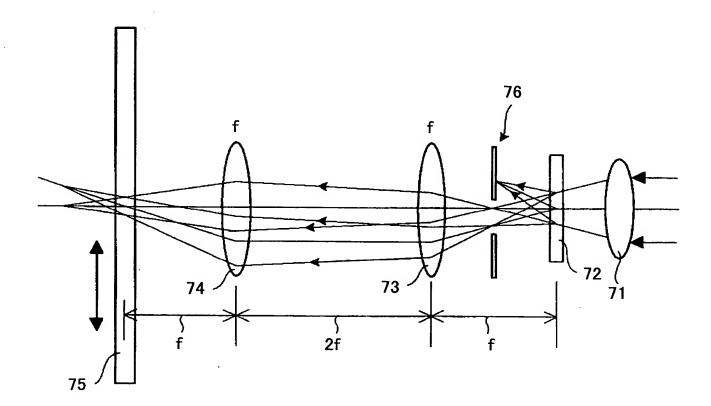
Docket No.: R2184.0312/P312

Sheet 34 of 35

FIG.59



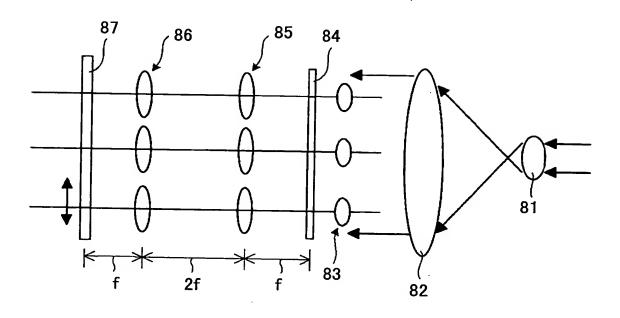
**FIG.60** 



App No.: Not Yet Assigned Docket No.: R2184.0312/P312 Inventor: Hiroyoshi Funato et al. Title: DIFFRACTION GRATING, METHOD OF PRODUCING IT, METHOD OF DUPLICATING IT, OPTICAL HEAD DEVICE...

Sheet 35 of 35

FIG.61



**FIG.62** 

